



US 20030019083A1

(19) **United States**

(12) **Patent Application Publication**
Won

(10) **Pub. No.: US 2003/0019083 A1**

(43) **Pub. Date: Jan. 30, 2003**

(54) **CLIP FOR MOUNTING A VEHICLE
SUNVISOR**

Publication Classification

(51) **Int. Cl.⁷ A44B 17/00**

(52) **U.S. Cl. 24/297**

(76) **Inventor: Sung-Jai Won, Kyoungki-Do (KR)**

(57) **ABSTRACT**

Correspondence Address:
Pennie & Edmonds, LLP
3300 Hillview Avenue
Palo Alto, CA 94304 (US)

Disclosed are clips for mounting a vehicle sunvisor made of plastic wherein multiply stepped sloping roof trim is made to be in close contact with the bottom part of the clips so that sunvisors can be securely fixed onto the headlining; sloping elastic wings, which are extended laterally from the projection of the clip on both sides, are inserted into clip assembly holes prepared for the insertion of the projection of the clip, and fixed thereon; the bottom part is fixed by bolting down bolts through the clip bolt holes thus preventing the dislocation or horizontal movement; which can prevent contact noise and also reduce its weight to become much lighter as compared to the conventional clips made of steel.

(21) **Appl. No.: 10/076,196**

(22) **Filed: Feb. 12, 2002**

(30) **Foreign Application Priority Data**

Jul. 24, 2001 (KR) 2001-44384

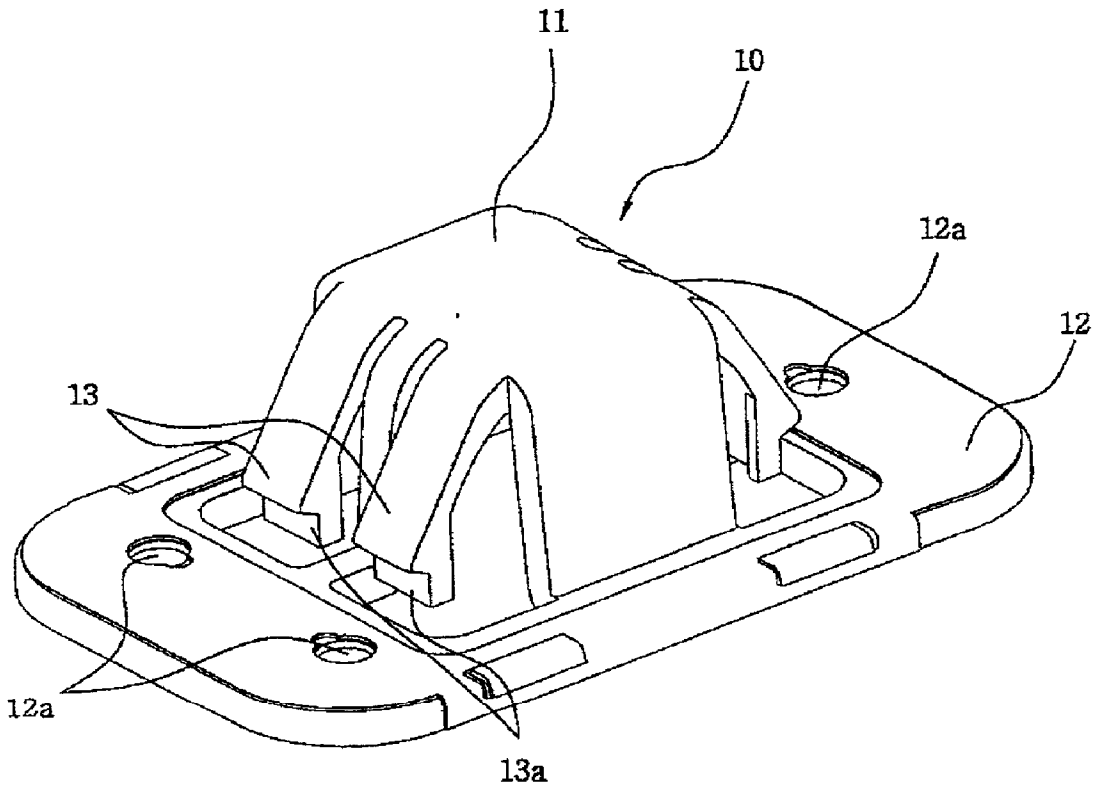


FIG. 1

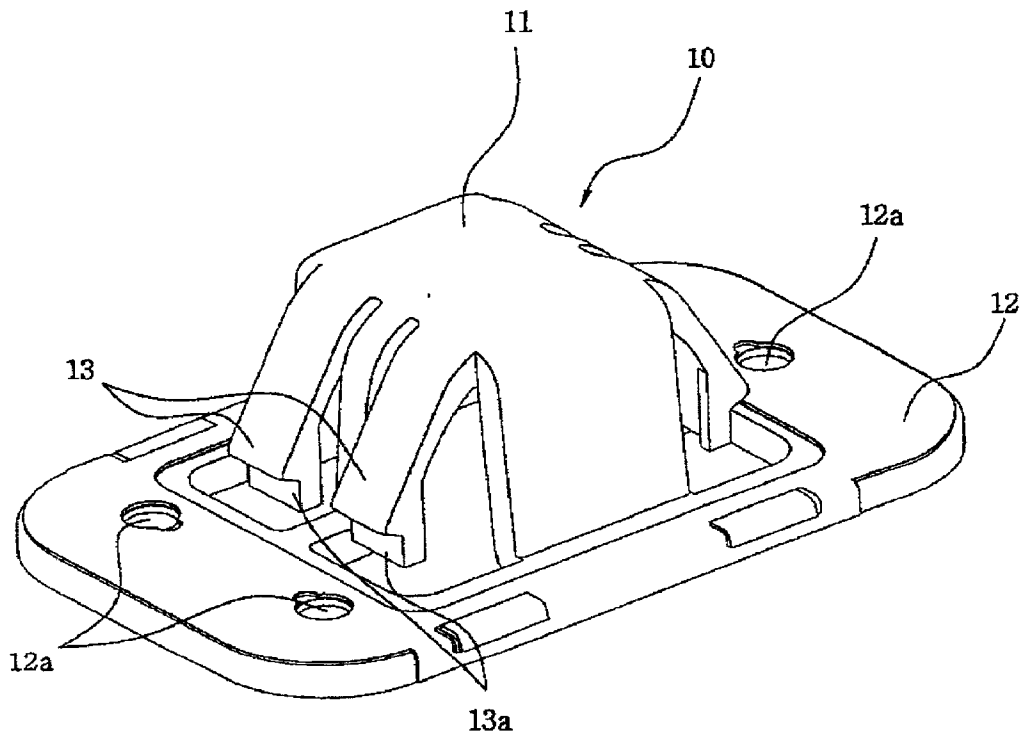


FIG. 2

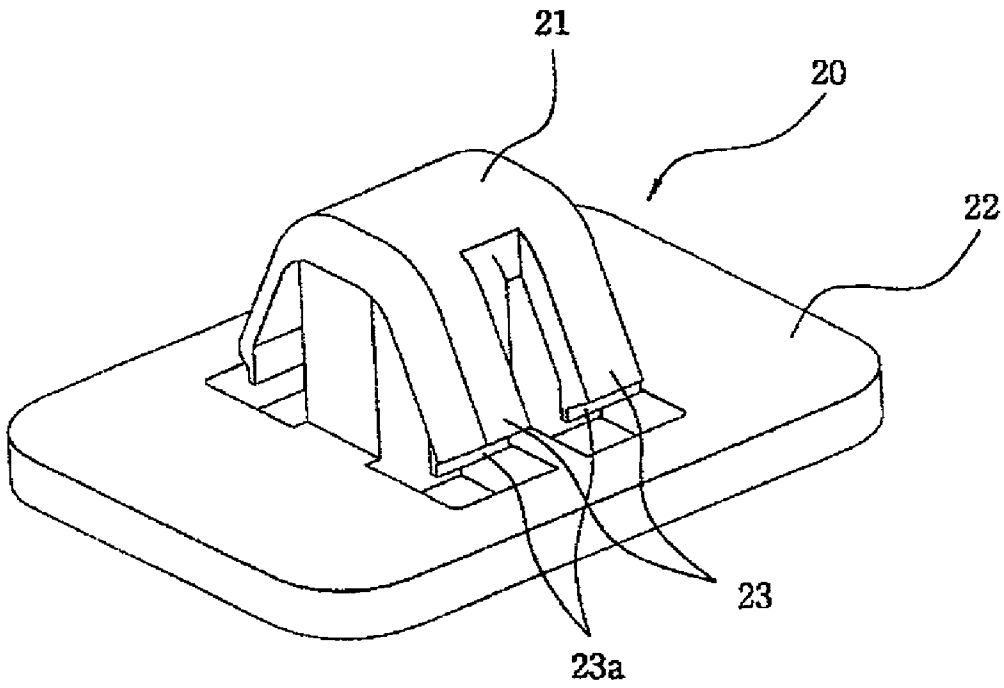


FIG. 3

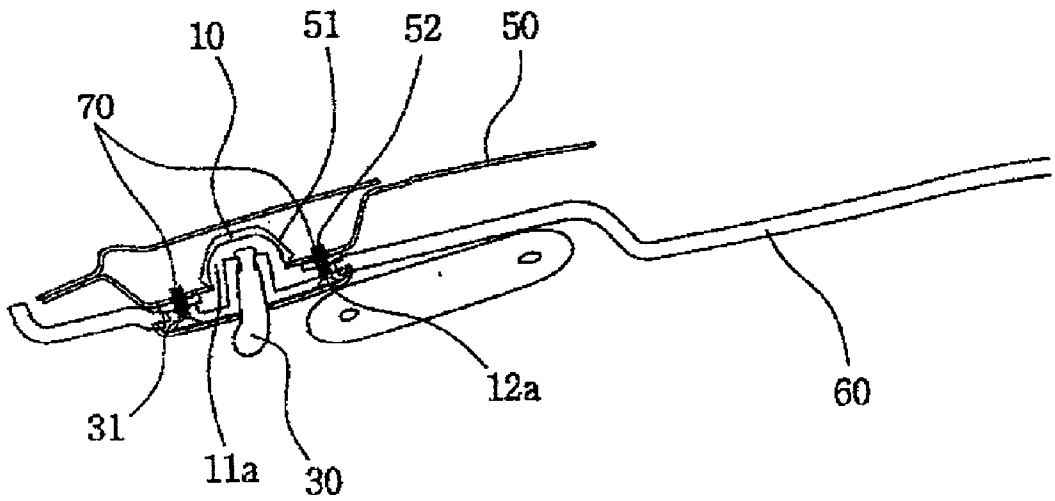


FIG. 4

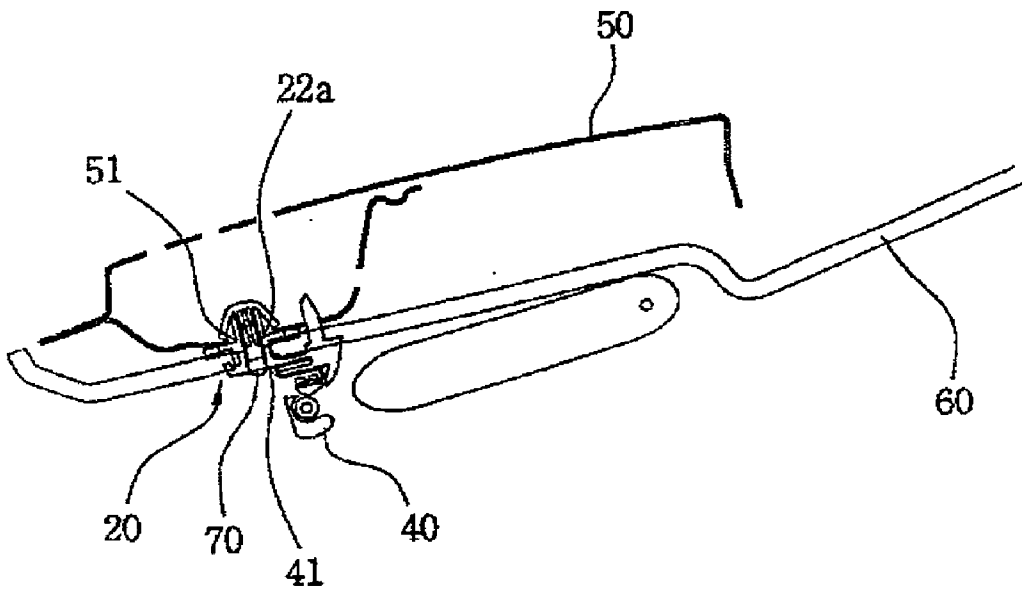


FIG. 5 (Prior Art)

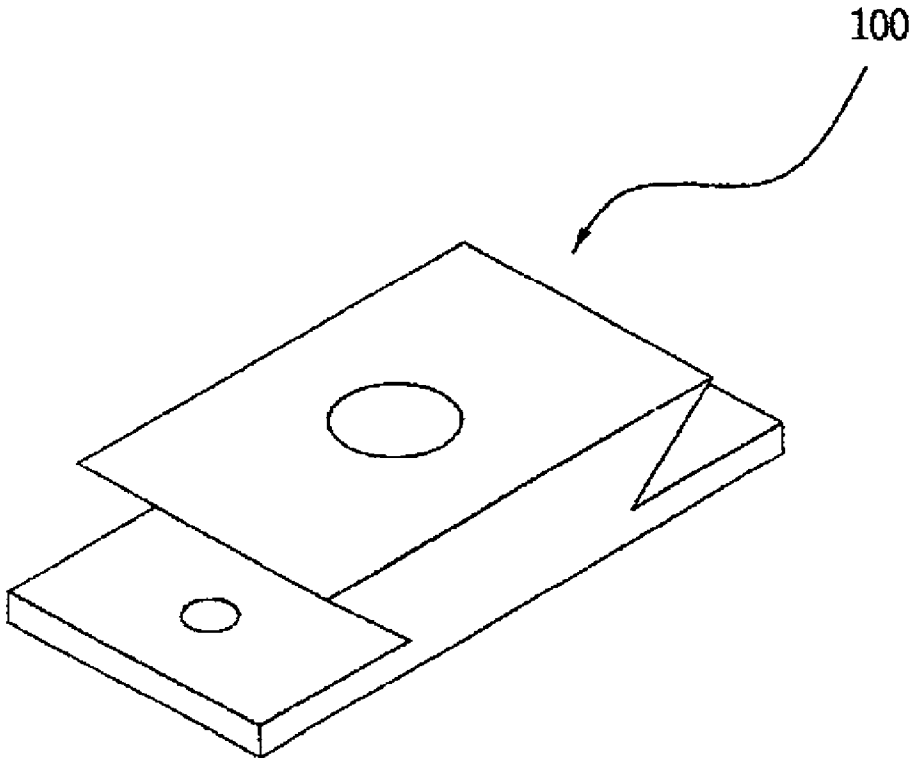
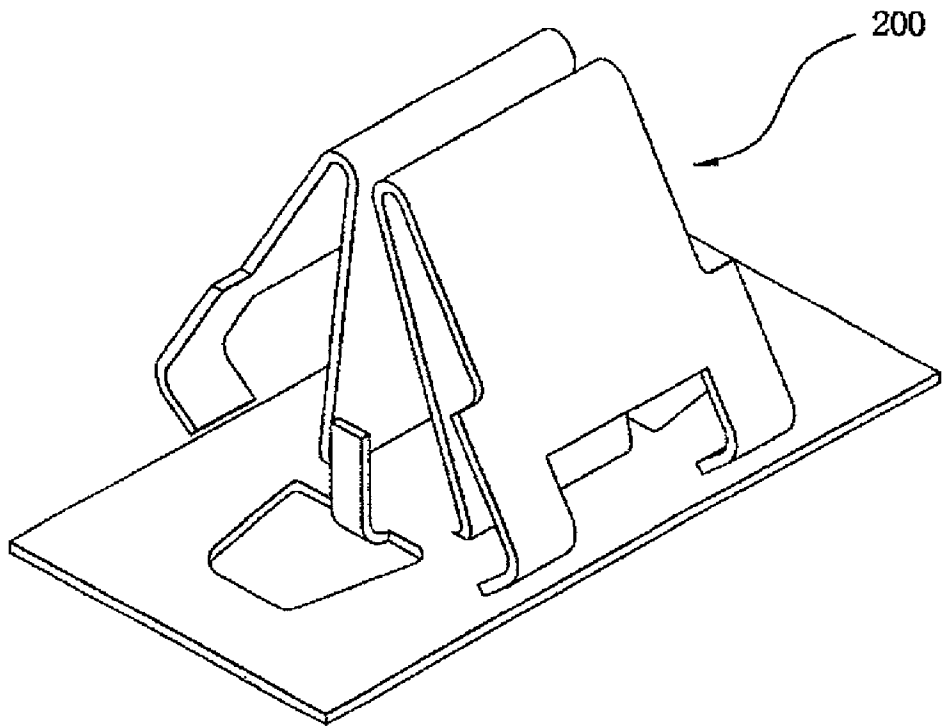


FIG. 6 (Prior Art)



CLIP FOR MOUNTING A VEHICLE SUNVISOR

FIELD OF THE INVENTION

[0001] The present invention relates to a clip for mounting a vehicle sunvisor, and more particularly, to a clip for mounting a vehicle sunvisor made of plastic which can reduce contact noise generated in the conventional steel clip and reduce the clip weight.

BACKGROUND OF THE INVENTION

[0002] In general, the body of a vehicle comprises panels which outline the external body shape, stiffeners, which reinforce the strength of the panels and trims, which are used as materials for interior decorations. More specifically, there are roof panels and roof side panels located on the upper portion of a vehicle body. The roof panel is where headlining and roof trim are mounted. The mountings of headlining and roof trim onto the roof panel have been carried out using clips.

[0003] However, the conventional clips used in mounting vehicle sunvisors, as shown in FIGS. 5 and 6, were either bolt fixing clips 100 or fixing clips with wings 200, which are easily released due to weak assembly force thus lowering the reliance and quality of the product. Further, conventional clips have been less than advantageous in that they were made of steel thus making unwanted noise by contacting with roof trim.

SUMMARY OF THE INVENTION

[0004] The present invention provides a clip for mounting a vehicle sunvisor, wherein roof trim with sloping multiple steps is in close contact with the bottom part of the clip. Elastic wings on the clip extend downwardly at an angle on both sides. The wings are inserted into clip assembly holes in the trim, which are prepared for the insertion of the projection of the clip and fixed thereafter. The bottom part of the clip is fixed by bolting through bolt holes, thus preventing dislocation or horizontal movement. Further, the present invention is made of plastic and thus can prevent contact noise usually produced in conventional clips made of steel. Also, the lightness in weight of the clip of the present invention made of plastic can help to reduce the body weight of a vehicle to comply with the current global trend of manufacturing automobiles.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. 1 is a perspective view of a clip for mounting a vehicle sunvisor according to the present invention;

[0006] FIG. 2 is a perspective view of an alternative clip for mounting a vehicle sunvisor according to an alternative embodiment of the present invention;

[0007] FIG. 3 is a schematic cross-sectional view of the mounted state of the clip shown in FIG. 1;

[0008] FIG. 4 is a schematic cross-sectional view of the mounted state of the alternative clip shown in FIG. 2; and

[0009] FIGS. 5 and 6 are perspective views of conventional clips for mounting a vehicle sunvisor.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0010] The present invention is further described with reference to the drawings as set forth hereunder.

[0011] As shown in FIG. 1, a first clip 10 for mounting a vehicle sunvisor comprises a cubic projection 11, and a rectangular bottom 12 perpendicular to the above cubic projection 11. Elastic wings 13 laterally extend from the cubic projection 11 on two sides, and clip bolt holes 12a are formed on the rectangular bottom 12. There is a space 11a provided inside the projection 11 so that the sunvisor pivot arm 30 can be inserted. The elastic wings 13 extend laterally at an angle on both left and right faces toward the rectangular bottom 12, and a flange 13a is produced at the end of the projection 11 so that the edge of clip assembly hole 51 of the roof trim 50 can be received in the stepped portion of the flange 13a and fixed thereon.

[0012] An alternative clip 20 for mounting a vehicle sunvisor, as shown in FIG. 2, has a scaled-down shape of the first clip 10 and comprises a cubic projection 21, a rectangular bottom 22 perpendicular to the cubic projection 21, and elastic wings 23 that laterally extend from the cubic projection 21 on both sides. A flange 23a is formed at each end of the projection 21 so that the edge of a hole for clip assembly 51 of roof trim 50 (FIG. 4) can be fitted into a stepped part of the flange 23a. A clip bolt hole 22a is formed on the center of the rectangular bottom 22. The bolt 70, which is used to fix the retractor 40, is bolted down through the bolt hole 22a.

[0013] More specifically, both of the above-mentioned clips 10 and 20 for mounting a vehicle sunvisor are characterized by being made of plastic material to avoid the generation of contact noise.

[0014] The basic principle of the operation of the clip for mounting a vehicle sunvisor of the present invention is described below.

[0015] As shown in FIG. 3, multiply stepped roof trim 50 is made to be in close contact with the bottom 12 of the first clip 10 for fixing sunvisor pivot arm 30 for the purpose of fixing the roof trim 50 to headlining 60. Elastic wings 13 are inserted into the clip assembly hole 51, wherein the projection 11 of the first clip 10 is inserted. Then, the elastic wings 13 are bent toward the projection 11 of the first clip 10 and a stepped part of the flange 13a formed on elastic wings 13 is fitted into the clip assembly hole 51 and fixed thereon, which then leads to an elastic diversion of the elastic wings 13 thereby fixing the first clip 10 to the roof trim 50. Meanwhile, sunvisor pivot arm 30 is closely contacted to the bottom surface of the roof trim 50, and then pivot arm hole 31, clip bolt hole 12a, trim bolt hole 52 are aligned in this order and the bolt 70 is bolted down through them.

[0016] As shown in FIG. 4, the second clip 20 for fixing sunvisor retractor 40 is fixed to headlining 60 by using the same mounting method as in the first clip 10, and the retractor bolt hole 41 formed on sunvisor retractor 40 and the clip bolt hole 22a formed on the center of the second clip 20 are aligned and assembled by bolting down using the bolt 70.

[0017] Clips 10 and 20 for mounting vehicle sunvisors, elastically fixed into the roof trim 50 as well as fixed to the headlining 60, can secure the mounting of vehicle sunvisors thus contributing to the quality increase of an automobile mounted with these clips. Consequently, the clips for mounting vehicle sunvisors of the present invention are advantageous as compared to those of conventional ones in that they

can reduce contact noise, are much lighter in weight and the resulting assembly strengthened over the conventional clip, thus increasing the quality and reliance of an automobile mounted with the clips according to the present invention.

What is claimed is:

1. A clip for mounting a vehicle sunvisor, comprising:
 - a cubic projection wherein internal space is provided for the insertion of a pivot arm;
 - a rectangular flat bottom which is formed in parallel to a lower part of said projection;
 - elastic wings extending laterally on both sides of the projection at an angle toward said rectangular flat bottom wherein a flange is formed at each end of said wings so that an edge of a hole for a clip assembly of a roof trim can be fitted into said flange; and
 - a hole for a clip bolt formed on the outer surface of said rectangular flat bottom.
2. A clip for mounting a vehicle sunvisor comprising:
 - a cubic projection wherein a hole for clip bolt is provided for insertion of a bolt which is assembled into a retractor;
 - a rectangular flat bottom which is formed in parallel to a lower part of said projection; and
 - elastic wings extending at an angle toward said rectangular flat bottom from said projection wherein a flange is formed at each end of said wing so that an edge of a hole for a clip assembly of a roof trim can be fitted into said flange.
3. The clip according to claim 1, wherein said clip is made of plastic to reduce noise produced by contact between said clip and the roof trim.
4. The clip according to claim 2, wherein said clip is made of plastic to prevent noise produced by contact between said clip and the roof trim.

5. The clip according to claim 1, wherein said flat bottom has a width and a length with the length being of a greater dimension than the width and said elastic wings extend along said length.

6. The clip according to claim 2, wherein said flat bottom has a width and a length with the length being of a greater dimension than the width and said elastic wings extend along said width.

7. A clip for mounting a vehicle sunvisor, comprising:

a flat bottom portion;

a projection extending from said bottom portion, said projection defining a hollow interior;

elastic wings extending from the projection at an angle towards the flat bottom portion; and

notched flanges formed on an end of the elastic wings opposite the projection.

8. The clip according to claim 7, wherein:

said projection is generally cubic in shape; and

said wings are formed in pairs on two opposite sides of the projection.

9. The clip according to claim 8, wherein:

said flat bottom portion has a width and a length with the length being of a greater dimension than the width and said elastic wings extend along said length; and

said flat bottom portion defines at least one bolt hole therethrough.

10. The clip according to claim 8, wherein said flat bottom has a width and a length with the length being of a greater dimension than the width and said elastic wings extend along said width.

* * * * *